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Eleventh TIES (Technological Information Exchange System) Meeting
Warsaw, Poland, 10-13 November 1986

DRAFT REPORT*

Prepared by

UNIDO Secretariat

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I. INTRODUCTION

1. The Eleventh TIES Meeting was held in Warsaw, Poland, from 10 to 13 November 1986, under the sponsorship of the Government of Poland and the United Nations Industrial Development Organization (UNIDO). The purpose of the meeting was to increase awareness in the value of further developing information on the acquisition and transfer of technology. The meeting would provide participants with a practical insight into the potential applications of the Computerized Registry Information System (CORIS) at the national level. The meeting would also assess the recent developments in TIES and review the evolution of the functions of the Transfer of Technology Registries.

II. ORGANIZATION OF THE MEETING

2. Annex II lists the participants, representing 17 countries and 2 international organizations. UNIDO was represented by the Deputy Director-General, Department of Industrial Promotion, Consultations and Technology, and three staff members.

III. OPENING OF THE MEETING

3. As Chairman of the Tenth TIES Meeting, Mr. Mohamed Amin Badawy, Director of the Technology Transfer Department of the General Organization for Industrialization of Egypt (GOFI), opened the meeting. He appraised the contribution of the TIES System towards strengthening the capability of developing countries in technology acquisition.

4. The meeting elected the following officers:

Chairman: Mr. Hubert Janiszewski (Poland)
Vice-Chairman: Mr. Fred Okono (Nigeria)
Rapporteur: Mr. Vladimir Ramirez Sanchez (Venezuela)

5. Upon the request of the Philippine representative, the meeting agreed to include in its provisional agenda and programme a paper prepared by the software expert from Malaysia on the possible adaptation and conversion of CORIS from GW-Basic to DBase III. Annex 1 shows the modified agenda.

6. In his inaugural address, Mr. B. Sosnowski, Director of the Department of International Organizations in Poland's Ministry of Foreign Trade, welcomed the participants particularly those in Poland for the first time. He provided a tour d'horizon of progress made since the first meeting of the Heads of Registries in 1978. He surveyed the work of TIES and its rapidly expanding functions since its inception, which had culminated in the creation of a computerized system called CORIS. CORIS was developed further by the Polish Registry -- the Foreign Trade Data Centre -- and since 1985 efforts have been made to introduce it in India, Nigeria, Argentina, Poland, the People's Republic of China and the ASEAN countries. Mr. Sosnowski felt this should not be the final development phase for TIES. On the contrary, he pointed out,

TIES had now reached a turning point: the role of Technology Transfer Registries had evolved from mere controlling bodies to promotional and policy developing agencies. The time was ripe therefore to ask the meeting to respond to critical issues such as: What future role should Registries take on in shaping national technology policies? How could Registries assist in promoting a more thorough understanding of the contents of technology agreements in fields such as microelectronics, genetic engineering and biotechnology? How could Registries cope with new sources of technology emanating from developing countries themselves? Mr. Sosnowski wished the participants a successful conference which he said would enhance the work of the Registries in the coming years and would assist the UNIDO Secretariat's activities on behalf of the TIES members.

7. In his address, Mr. Fernando Simoes Souto, Deputy Director-General of UNIDO's Department for Industrial Promotion, Consultations and Technology, expressed his gratitude to the Government of Poland for hosting the meeting and for its continued co-operation in UNIDO programmes. He pointed out that the Transfer of Technology Registries had become important in developing national technological capabilities and were now considered indispensable partners in the international process of technology acquisition and development. Recognizing the value of TIES as a unique programme, UNIDO was determined to support TIES activities, Mr. Souto stressed.

8. In the first working session, a representative of the UNIDO Secretariat introduced the document, "TIES Progress Report", an account of the current status of information exchange, progress in TIES-related activities and prospects for future action.

The participants' attention was drawn to the following achievements, as mentioned in the Progress Report:

- Information exchange continued at TIES I and TIES II level among member countries and efforts were made to convert the present TIES software at the UNIDO Headquarters from the present batch system into one on-line system;

- Special requests for assistance in evaluating technology transfer agreements increased;

- Country profiles and material on the legal and institutional infrastructure of member countries as related to technology transfer were compiled;

- CORIS was implemented, an ASEAN Technological Information System was created, and activities for the creation of an African network for information exchange in the field of technology transfer negotiations have been initiated;

- Publications were completed including the "Guide on Guarantee and Warranty Provisions in Transfer of Technology Agreements" and the "Guide on Payments in Engineering and Consultancy Agreements". Work on a "Guide on Joint Ventures" has started;

- Specific training activities were carried out for Registry staff and workshops and seminars were organized, supplemented by direct advice to the participants on contracts presently under negotiation;

- Technological advisory services started expanding the scope and flexibility of their output through the creation of a desk service at UNIDO headquarters offering advice free of charge;

- Co-operation with the Licensing Executives Society (LES) progressed, notably at the meeting of UNIDO, LES representatives and Heads of Transfer of Technology Registries in Vienna from 5-7 November 1986.

The Progress Report had also covered trends detected in the TIES system, the possible orientation of the Transfer of Technology Registries and suggestions for their future development.

9. Mr. J. Strzelecki of the Foreign Trade Data Center in Warsaw, Poland, presented the "CORIS Development Report and Comparative Analysis". The paper dealt with the process of creating CORIS as a compatible computerized registry information system. It reviewed the present status of CORIS implementation at the national level in India, Poland and Nigeria.

The paper contained tables comparing the different versions of CORIS software. One table compared the specialized features of the CORIS system as tailored for different countries. Another table depicted the differences among the range of data registered in the developed versions of CORIS, thus showing the scope of changes that had been required and proving the flexibility of the CORIS software to meet the Registries' specific needs. The paper analysed basic features of CORIS: IBM compatibility, usefulness in Registry activities and its user-friendly adaptation. The paper also dealt with the software's advantages and disadvantages. It then suggested some basic options on CORIS' development prospects which the meeting could take up.

10. Mr. David Lee, software expert from Malaysia, presented his paper, "ASTIS/CORIS Malaysia - Possible Adaptation and Conversion from Basic to DBase III". It dealt with the possibility of adapting and converting CORIS from Basic to DBase III, thus securing the main objectives of CORIS implementation in Malaysia. These were: (a) successful implementation while maintaining TIES and ASTIS compatibility, (b) on-going local or regional support and maintenance of

adopted CORIS package and (c) flexible environment for growth, information access and network of interfacing requirements in the future.

11. Mr. Z. Bogdanowicz in the Polish Trade Commissioner's Office, Toronto Branch, presented a paper on "Networking of Information Systems on Technology Transfer " . The paper suggested that in the process of computerizing Technology Transfer Registries, a country could consider a more complex data processing system called a computer network wherein a number of computers were interconnected by communication lines. This option held two advantages: First, the functional usefulness of CORIS would be significantly expanded. Second, since 1984 when the idea of CORIS emerged, prices of basic hardware for PCs had decreased dramatically. The need for a network configuration had already arisen in the process of implementing CORIS in Nigeria. Network connections could transmit data between UNIDO headquarters and TIES member countries, the report added. Similarly, regional co-operative information exchanges could benefit from the data transmission capability. However networking should not be seen merely as the acquisition of additional equipment, the report pointed out. Specific technical and organizational problems which would inevitably arise should be resolved at the preparatory stage, keeping in mind the favourable end results of networking for Registry activities and operations.

The paper noted that some of the features of a prospective network arrangement in international TIES exchange had already been incorporated in the overall design of the CORIS system. Greater attention would have to be paid to intra-Registry networking and establishing direct computer linkages between Technology Transfer Registries and government bodies within each country.

12. Mr. J. Cieslik of the Foreign Trade Data Centre in Warsaw, Poland, presented the paper, "Some Considerations on the Application of CORIS for Improving Registry Performance". The paper outlined the ways in which computerization could improve the performance of Technology Transfer Registries:

Firstly, computerization would facilitate day-to-day contract evaluation activities. The CORIS system would enable easy access to data on past contract registration, evaluation and approval -- information necessary to compare and analyse terms and conditions. CORIS would also facilitate monitoring. Monitoring, however, would require additional information inputs by way of regular progress reports from the recipient enterprise.

Secondly, installing a computerized system would enable Registries to establish automatic linkages with other data banks, in turn possibly expanding system capabilities substantially. Already existing at the national level were computerized linkages with technological data banks, statistical data bases on manufacturing establishments, export/import transactions and direct foreign investment.

Some international data bases to which a computerized system could be linked were UNIDO's INTIB and UNCTC's information system on transnational corporations.

Thirdly, easy retrieval of aggregated data from the computerized system would enhance dissemination of relevant information to outside users especially to the government bodies and the mass media, making it possible for registries to influence policies and decisions in technology transfer. Eventually the Registries could launch an "Annual Review of Technology Transfer" for each specific area, regular publications based on statistical data from the system.

IV. SUMMARY OF THE DISCUSSIONS

13. The discussions focussed on two major areas:

a) <u>The role of TIES; functions of Transfer of Technology Registries and their evolution and future orientation</u>

Participants unanimously recognized the importance of TIES. They underscored the usefulness of UNIDO assistance under the TIES programmes, specifically the training programmes and the flow of information and advice in evaluating specific transfer of technology agreements.

Some participants felt that the Service of Special Requests should be intensified. The regular information exchange through TIES I and TIES II, they felt, contributed to a deeper knowledge of technology flows. The potential usefulness of the information in preparing sectoral studies, identifying technology sources, assessing transfer of technology trends and preparing annual global and country reviews could be tapped further. This potential could be enhanced by converting the present TIES software from a batch system to an on-line system.

Participants discussed the scope of information currently exchanged and its confidentiality. Some suggested that formats could be expanded while others thought these were issues better left to the discretion of member countries. Since TIES operated on a confidential and reciprocal basis, participants agreed that TIES and INTIB should not be linked without first consulting TIES members on the content of the TIES information that could be made freely accessible through the INTIB database.

Participants expressed appreciation for the work carried out by the UNIDO Secretariat and requested that training programmes and publications be expanded. The group referred to the need for more work in the following areas: Systematically collecting and disseminating statistical data on technology flows; updating country profiles; harmonizing definitions and establishing common

guidelines; conducting sectoral surveys in the field of advanced technologies; compiling jurisprudence on the practices of Registries; and preparing guidelines on specific topics such as joint ventures. Suggestions were put forward about disseminating articles from publications prepared by other organizations relevant to the Transfer of Technology Registries. Studies and reports from SAIT, for instance, could be translated by UNIDO.

There was a general perception that the effectiveness of TIES was greatly enhanced through personal contacts and direct sharing of experiences among personnel responsible for the Transfer of Technology Registries. Bilateral contacts were considered useful and regular TIES meetings indispensable.

Monitoring implementation of agreements and their impact on the national economies was deemed an essential Registry activity. The groups observed that the Registries were evolving; having been largely regulatory bodies, they were now taking on a major policy-making role in their countries.

Regionalization and economic integration were seen as possible discussion topics at the next TIES meeting. A number of participants raised the issue of financing for operating TIES and computerizing Transfer of Technology Registries. UNIDO was urged to secure the necessary resources to assure the continuation and expansion of these programmes.

b) Appraisal of CORIS development and clarification of outstanding implementation issues

Participants observed a demonstration on CORIS. They discussed the options they could adopt for the future expansion of the CORIS programme. They took note of Malaysia's intentions to implement ASTIS/CORIS in DBase III Plus.

14. Participants were appreciative of the results of the UNIDO/LES meeting held in Vienna from 5-7 November 1986. The dialogue with LES was beneficial, they said, and should be continued and intensified.

15. The group was grateful for Brazil's representation at this meeting. Its representative gave an overview of the Industrial Property Institute of Brazil (INPI), which combines the functions of Industrial Property Office and Transfer of Technology Agency with a strong promotional element. An information bank for patents served the business community by being an additional source of information on available technologies. The meeting took note of INPI's wish to co-operate more closely with TIES.

V. CONCLUSION AND RECOMMENDATIONS

1. TIES members consider TIES programme a major activity of UNIDO, warranting high priority in financial and manpower allocation within the Secretariat.

2. The Polish Data Centre will modify the GW-BASIC version of CORIS so that, if required, it could be implemented immediately by TIES members. After this, any further decisions and costs involved in the development of GW-BASIC CORIS would be left to the users. Technical problems will be addressed directly to the Polish Data Centre. The work proposed, to be done within approximately two months, is as follows:

   a) Programming Requirements

      1. CORIS will output a sequential file to be used as input to another system;

      2. CORIS will include a database back-up/recovery facility and user menu; and

      3. CORIS will include a transaction logging facility.

   b) Documentation Requirements

      1. A concise CORIS USERS' and TECHNICAL OPERATORS' manual will be produced.

3. TIES members urged the UNIDO Secretariat to set up and co-ordinate, within a reasonable timeframe, a detailed schedule for finalizing the system definition and conversion of the CORIS Standard Package to a flexible fourth generation package. The meeting took note of Poland's offer to support such a programme financially.

4. The group requested the UNIDO Secretariat to compile a jurisprudence of the Registries for a better understanding of their procedures and practices in evaluating and approving agreements. This work will be based on documentation which individual member countries will submit regularly to UNIDO.

5. The participants expressed a need for a survey on the impact of transfer of technology in selected countries, emphasising transactions which had not come up with expected results in the area of technology transfer.

6. There was a consensus on the need to continue and strengthen UNIDO training programmes in the field of technology acquisition among member countries. Increased use of available resources in the countries and at the regional and sub-regional level should be encouraged.

7. The UNIDO Secretariat was requested to continue timely publications on transfer of technology and negotiation issues, (joint ventures, payments in engineering contracts, guarantees

and warranties, and sectoral surveys in the field of advanced technologies). These provide up-to-date information and serve as working materials for Registries in their decision-making process.

8. Participants suggested increasing the content of information exchanged under TIES and enhancing co-operation among TIES members through more intensive use of UNIDO's Service of Special Requests and through direct co-operation among TIES members. These measures would allow exchange of more detailed information not only on terms of agreements but also on other parameters such as technological contents, local value added, manpower, unpackaging and supplementary costs.

9. The participants felt that the Registries should strengthen their role in formulating national economic strategies and industrial policies. Registries should also co-operate closely with the country's R+D sector, thus encouraging the sector to adapt imported technologies, generate local alternative technologies and promote national investment in innovative activities.

10. There was a consensus that TIES meetings were extremely useful since they fostered a feeling of solidarity among Registries and instilled a co-operative spirit among the members of the TIES system. TIES had in fact encouraged the creation of Registries in the member countries. It was felt that continuing the practice of regular TIES meetings merited high priority.

11. Through its representative, JUNAC offered to host the next TIES meeting in 1987 in Lima, Peru. This was in line with the participants' desire for closer co-operation among Registries on the regional and the sub-regional level. It also supported the participants' wish for interlinkages between regional and sub-regional systems with TIES.

The meeting at JUNAC could also endeavour to focus on the future role of the Registries in advancing regional economic integration.

The meeting noted with appreciation that through a communication addressed to the UNIDO Secretariat, the International Centre for Public Enterprises in Developing Countries had also proposed to host a future TIES meeting at its headquarters in Ljubljana, Yugoslavia.

ANNEX I

ELEVENTH MEETING OF HEADS OF TECHNOLOGY TRANSFER REGISTRIES

WARSAW, POLAND

10 - 13 November 1986

Agenda

10 November, Monday

9.00 - 10.00	Registration
10.00 - 10.45	Opening session
10.45 - 11.15	Coffee break
11.15 - 12.30	Working session I
	TIES Progress Report
	Discussion
12.30 - 14.00	Lunch break
14.00 - 17.00	Working session II
	Papers on CORIS Progress Report and on Possible Adaptation and Conversion of CORIS
	Paper on Technology Transfer Information Systems
19.30	Cocktail party hosted by Mr. B. Sosnowski, Director of the Department of International Economic Organizations, Ministry of Foreign Trade

11 November, Tuesday

9.00 - 10.00	Working session III CORIS demonstration
10.00 - 10.30	Coffee break
10.30 - 12.00	CORIS demonstration (cont'd.)
12.00 - 13.00	Working session IV Paper on Networking of Inf rmation Systems on Technology Transfer
13.00 - 15.00	Lunch break
15.00 - 17.00	Working session V General discussion

12 November, Wednesday

9.00 - 12.00	Working session IV General discussion and conclusions on computerization of Registries
12.00 - 13.15	Lunch break
13.15 - 15.00	Visit to Wilanow Palace
15.00 - 16.30	Working session VII General discussion on the trends of TIES
19.00	Dinner hosted by Mr. H. Janisewski, Department Director of the Ministry of Foreign Trade.

13 November, Thursday

9.00 - 13.00	Visit to Zelazowa Wola - Birthplace of Chopin - piano concert
13.00 - 14.30	Lunch break
14.30 - 16.00	Closing session (Adoption of the Report)
17.00	Cocktail party hosted by Mr. J. Stolarczyk, Director General of Foreign Trade Data Centre.

ANNEX II

List of Participants

	Country	Name and Address
1.	Argentina	Mr. Luis Alberto Ravizzini Oficina de Transferencia de Tecnología Instituto Nacional de Tecnología Industrial Leandro N. Alem 1067 Pisos 5, 6 y 7 1001 Buenos Aires Tel: 313-3054 Tlx: INTI 21859 AR
2.	Brazil	Mr. Manoel Edmilson do Nascimento INPI Co-ordinator, International Affairs National Inst. for Industrial Property Praca Maua, No. 7 Rio de Janeiro - CEP 2008 Tel: (021) 233 2822 -2534328 Tlx: 2122992
2.	China	Mr. Li Cunren Deputy Division Chief Ministry of Foreign Relations and Trade Technology Import and Export Department 2 Dong Chang An Street Beijing Tel: 553031 Tlx: 22478 MFERT CN
4.	Colombia	Ms. Graciela Valderrama de Prieto Superintendent (E) Superintendencia de Industria y Comercio Ministerio de Desarrollo Económico Carrera 13, No. 27-00 Piso 7, Bogota Tel: 234-6398 Tlx: N/A
5.	Egypt	Mr. Wahby Wahba Director General Research, Information and Promotion Sector Investment and Free Zones Authority 8 Adly Street, P. O. Box 1007, Cairo Tel: 606540 Tlx: 92235 INCST UN
6.	Egypt	Mr. Mohammed Amin Badawy Director General Organization for Industrialization Transfer of Technology Department 6, Khalil Agha St. Garden City, Cairo Tel: 541319 Tlx: TANFIZ UN 23389

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13.	Nigeria	Mr. Fred James Okono Director Federal Ministry of Science and Technology National Office of Industrial Property 109 Western Avenue Iponri-Lagos, P. M. B. 12806 Tel: 832734 Tlx: 26725 NOIP NG
14.	Peru	Mr. Adan Valdivieso Trillo Technology Director National Commission of Foreign Investment and Technology (CONITE) Av. Abancay 500-Of. 634, Lima 1 Tel: 277190 Tlx: 20187 MINDEF
15.	JUNAC (Peru)	Mr. Carlos Aguirre Chief, Department of Technological Policy Sistema Andino de Información Tecnológica (JUNAC), Junta del Acuerdo de Cartagena Paseo de la Republica 3819 Casilla de correo 3237, Lima Tel: 414-212 Tlx: JUNAC 20104 PU
16.	Philippines	Mrs. Lilia R. Bautista Vice Chairman and Acting Executive Director Technology Transfer Board Ministry of Trade and Industry Industry and Investment Building 385 Buendia Avenue Ext. Makati, Metro Manila Tel: 856487 Tlx: 45555 MI PM
17.	Poland	Mr. Hubert Janiszewski Department Director of the Ministry of Foreign Trade Wiejska 10 00-950 Warsaw 1 Tel: 210331 Tlx: 815501
18.	Poland	Mr. Jacek Stolarczyk Director General Foreign Trade Data Centre ul. Stepinska 9 00-739 Warsaw Tel: 413194 Tlx: 815504
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27.	Venezuela	Mr. Vladimir Ramirez Sanchez Civil Engineer, Division of Technology Transfer Superintendencia de Inversiones Extranjeras (SIEX) Centro Comercial Ciudad Tamanaco Mezzanina 2, Nivel C-2 Oficina M-6, Caracas Tel: 926378 Tlx: 24534